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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,694

03/10/2006

Pal Songe

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EXAMINER

MONSHIPOURI, MARYAM

ART UNIT

PAPER NUMBER

1656

MAIL DATE

DELIVERY MODE

07/20/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,694	Applicant(s) SONGE ET AL.	
	Examiner Maryam Monshipouri	Art Unit 1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/27/05, 1/12/06, 1/26/07, 1/25/07</u> . | 6) <input type="checkbox"/> Other: _____ |

Applicant's response to supplemental restriction filed 5/18/09 is acknowledged. In response to applicant's request and in view of amendment made to claim 2 all claims of Groups I(A)-(B) and all previously mentioned species are rejoined. Claims 1-19 are under examination on the merits. Claims 20-26 are canceled.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The structure of claim 19 is referred to as "(II)". It is unclear which claim recites the structure "(I)". Currently, there is no antecedent basis for said term "(II)". Appropriate clarification is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. "Nelson" (U.S. Patent No. 5,962,641, 11/1999, cited in the IDS) in view of Ugelstad et al. "Ugelstad" (U.S. Patent No. 4,654, 267, March 1987, cited in the disclosure). Nelson teaches preparation of caboxymethylated aspartate ligand attached

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to a polymer matrix (agarose) wherein said ligand (which can be uncharged) meets the structural limitations recited in claim 10 of this invention. Said chelating ligand is utilized to attach to histidine residues in proteins and polypeptides. Nelson does not teach its chelating ligand attached to a magnetic polymer particle.

Ugelstad teaches magnetic polymer particles (made of Fe^{2+} , Mn^{2+} , Co^{2+} and Ni^{2+}) meeting the limitations of claims 3-10, and their method of preparation, wherein said ions are oxidized to higher oxidation state in a polymer (e.g. styrene mixture) matrix, to be deposited in non-soluble form therein rendering the matrix magnetic. In column 2, line 9, Ugelstad teaches that the process used is best for preparing particles in the range of 0.5-20 μm . Ugelstad also in column 1, teaches that such particles may be used to replace a method of separation of particles by means of centrifugation. In claim 6 Ugelstad teaches that divinyl benzene may be copolymerized with styrene mixture utilized for magnetic polymer particle preparation.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to start with the chelating ligand of Nelson and substitute its R3 (polymer matrix, see column 2) with that of Ugelstad. One of ordinary skill in the art is motivated in substituting the supporting polymer matrix of Nelson with magnetic polymer matrix (particles) of Ugelstad because such substitution results in a product which can be easily recovered from a solution of protein or polypeptide (optionally being recombinant and his-tagged to ease recovery and isolation, or phosphorylated) by a magnet such that costly and time consuming centrifugation step will be eliminated, rendering the invention obvious.

One of ordinary skill in the art has a reasonable expectation of success in preparing such magnetic polymer matrix/aspartate chelating ligand conjugates because methods of preparation of such conjugates are fully established in the prior art.

Applicant is reminded that variations in length and structure of the wavy line shown in claim 10 of this invention, which are slightly different than the teachings of Nelson do not provide a contribution over the general state of prior art at the time of filing of this application and remain obvious.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maryam Monshipouri whose telephone number is (571) 272-0932. The examiner can normally be reached on Tues.-Fri., from 7:00 a.m to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (571) 272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Maryam Monshipouri/

Primary Examiner, Art Unit 1656
